

Dairy Farm Revitalization Task Force

Old Sturbridge Village
Sturbridge, MA

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Costs and Returns for Milk Production: Regional and State Comparisons.

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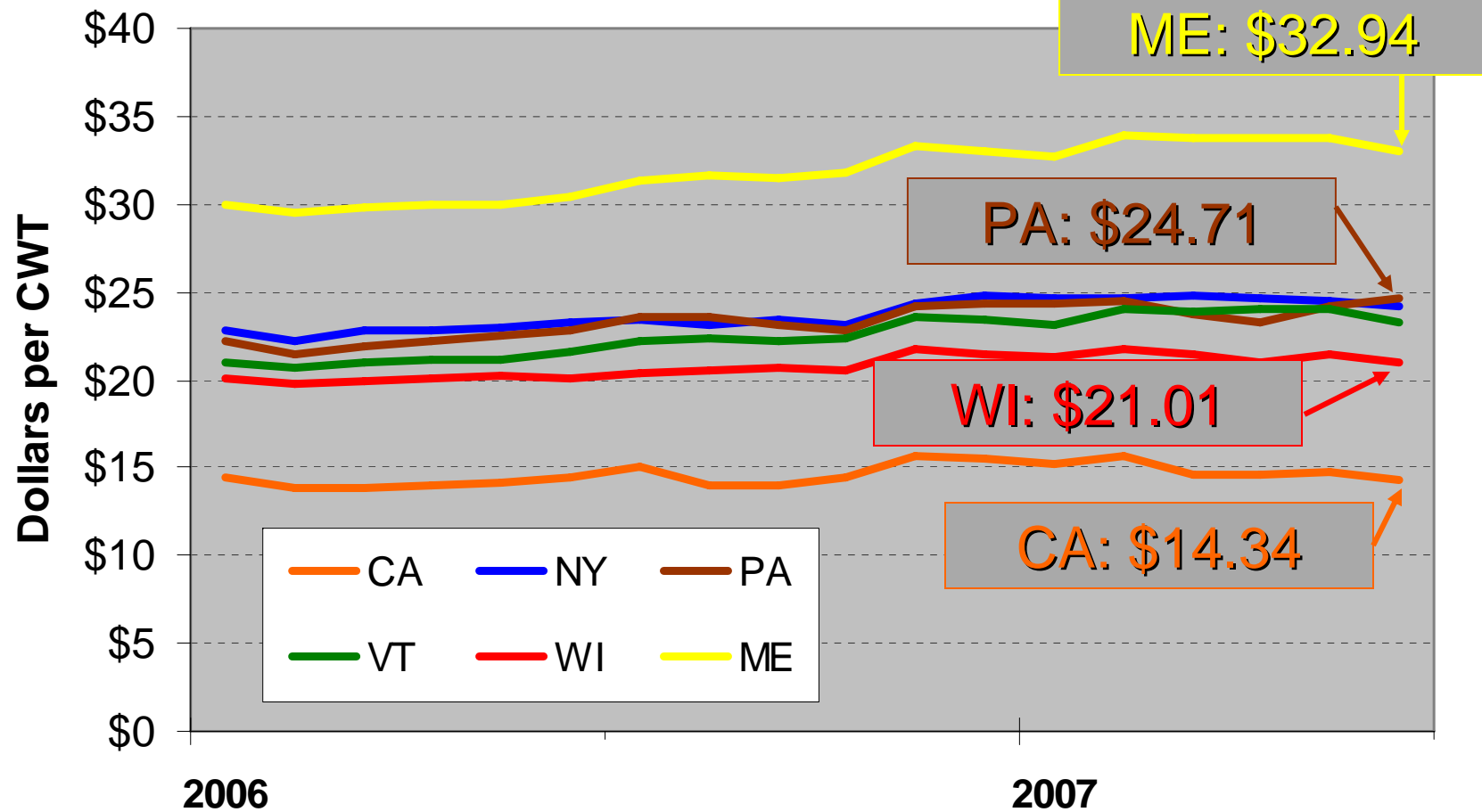
Costs of Production Estimates

- Survey data – used to estimate/measure average costs per CWT by cost category.
- Massachusetts – USDA does not gather sufficient data to estimate costs.
 - Too few dairy farms in state.
 - Would require *census* data.
- Best Guess – use other regional or state estimates.

Monthly Costs of Production Estimates.

- Source: USDA/ERS.
- Data: 2005 Agricultural Resource Management Survey (ARMS).
- ARMS \Rightarrow Average annual cost estimates for major input categories.
- Monthly estimates:
 - Allocate annual production based on *typical* monthly output.
 - 2006 and 2007 – Inflate 2005 estimates using input price indexes.

Total Monthly Costs: January 2006 – June 2007.



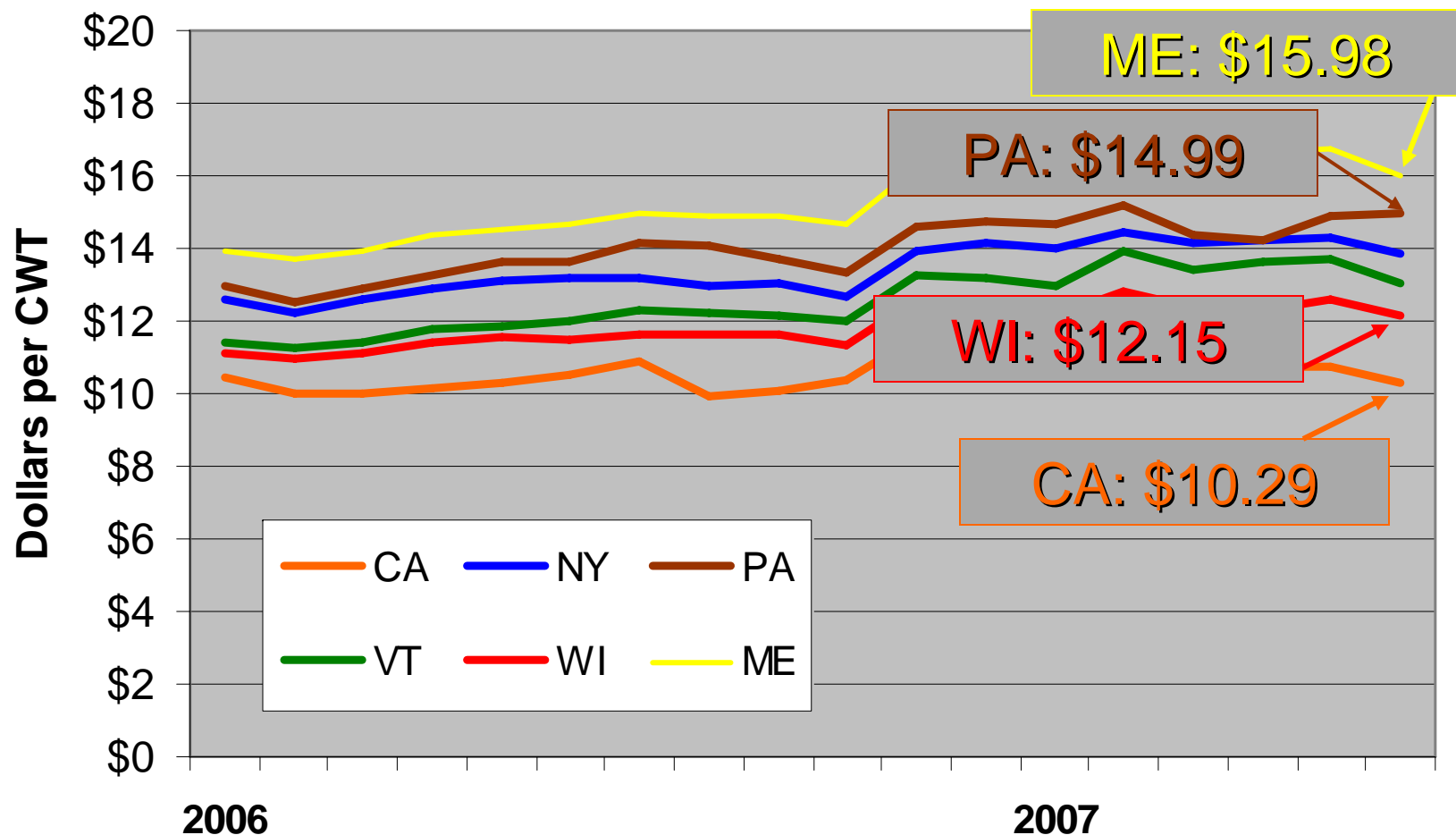
Common Trends

- ARMS \Rightarrow Average annual cost estimates for major input categories for 2005.
- Monthly estimates:
 - Allocate annual production based on *typical* monthly output.
 - Inflate 2005 estimates using input price indexes.

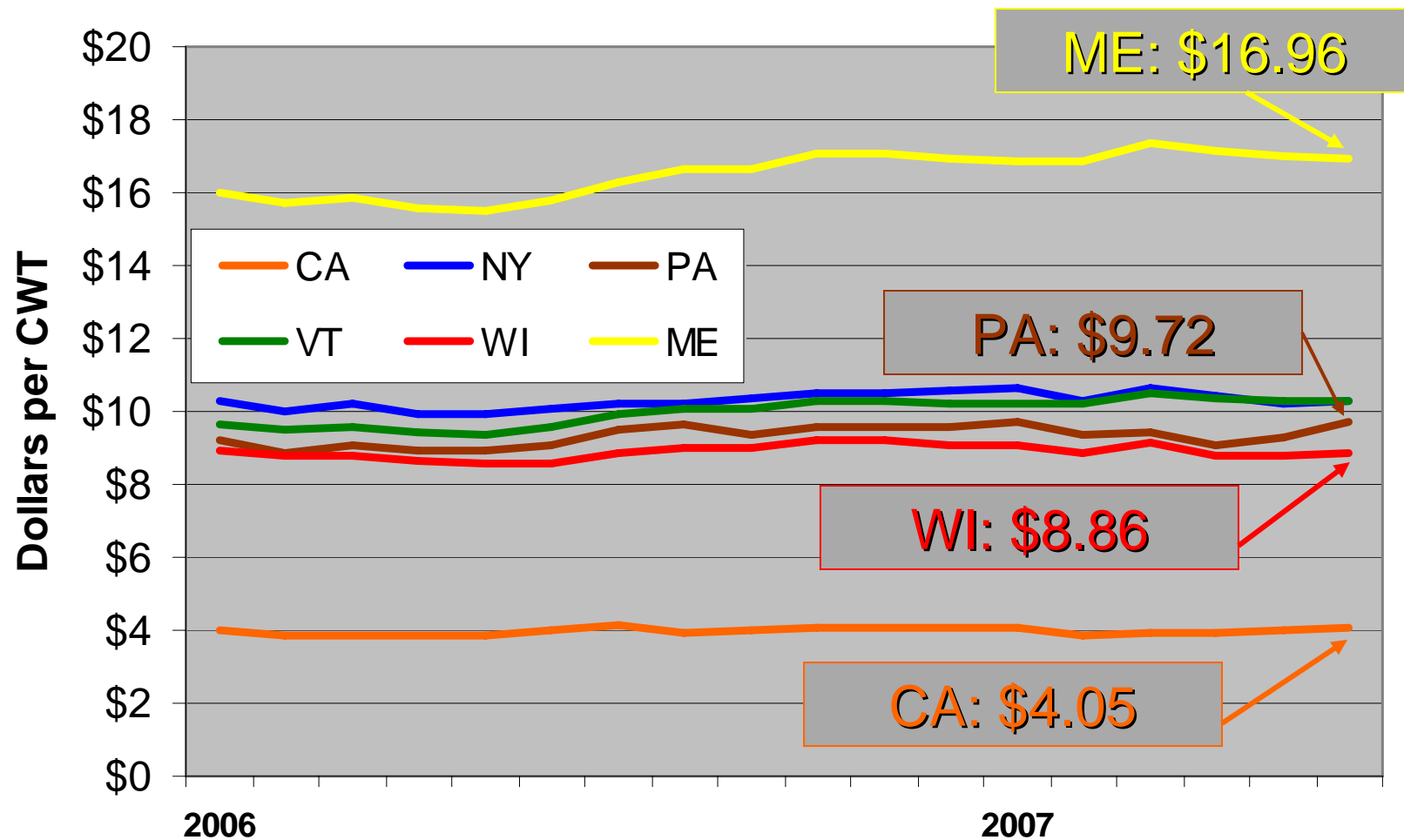
State Cost Differences

- Vary from \$14.34 (CA) to \$32.94 (ME).
- Why the differences?
- Breakdown Total Costs:
 - Operating Costs
 - Allocated Overhead
- Which inputs have greatest variation across states?

Monthly Operating Costs: January 2006 – June 2007.



Monthly Allocated Overhead Costs: January 2006 – June 2007.



Inputs with greatest regional variation.

Operating Costs

■ **Feed Costs:**

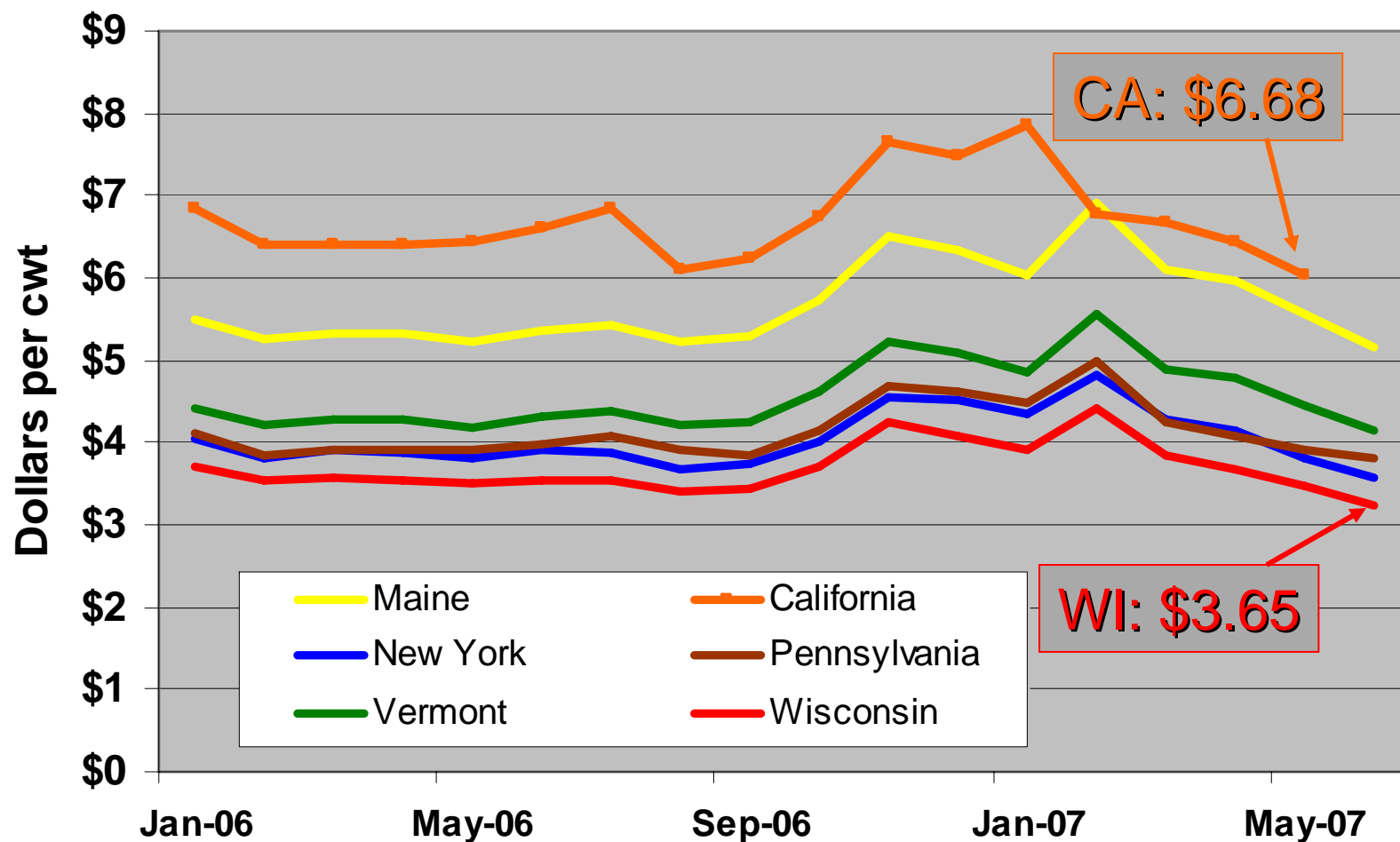
Purchased: Complete feeds, silage, supplements, pasture.

Homegrown and Harvested

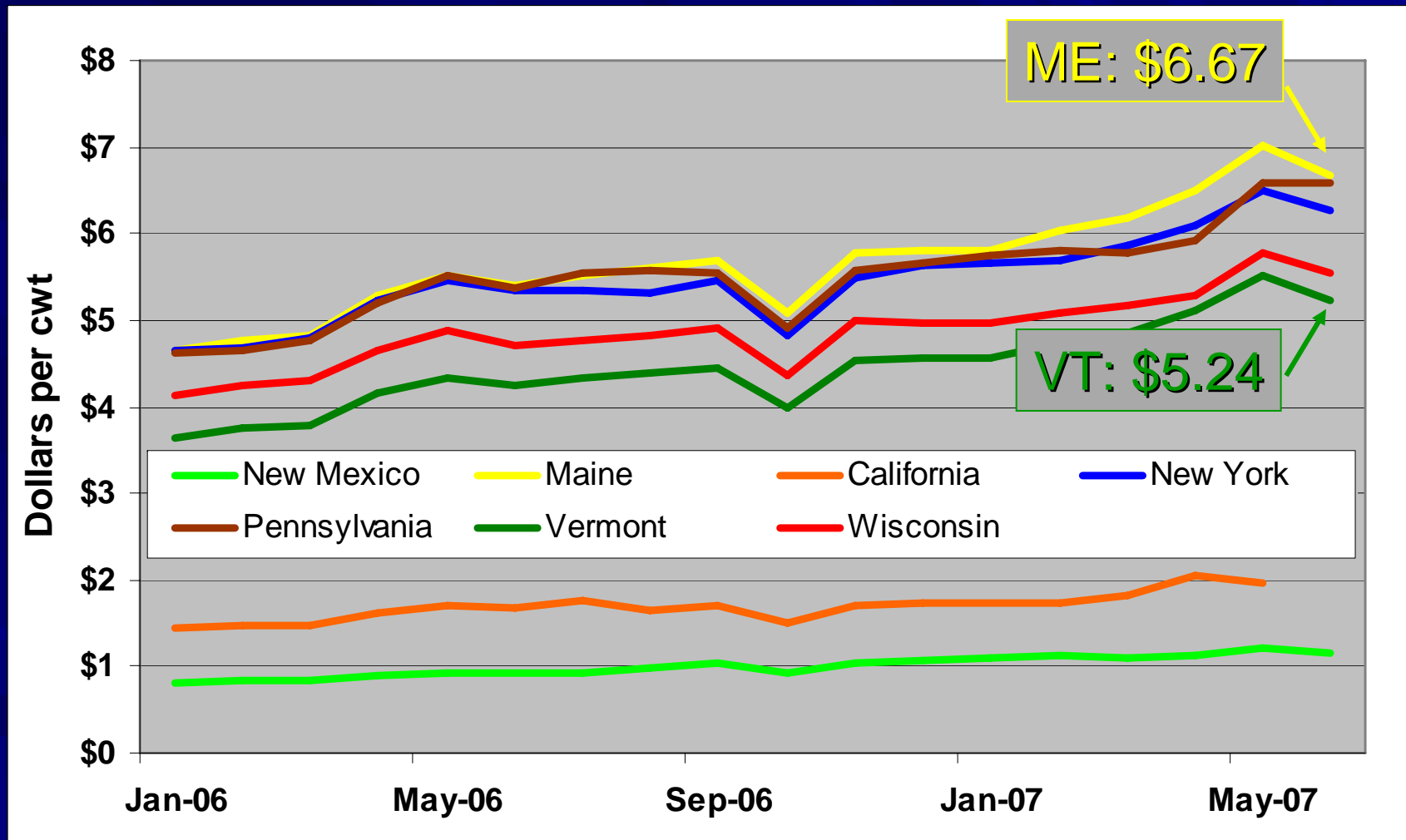
■ **Bedding.**

■ **Other:** licenses and permits.

Purchased Feed Costs: January 2006 – June 2007.



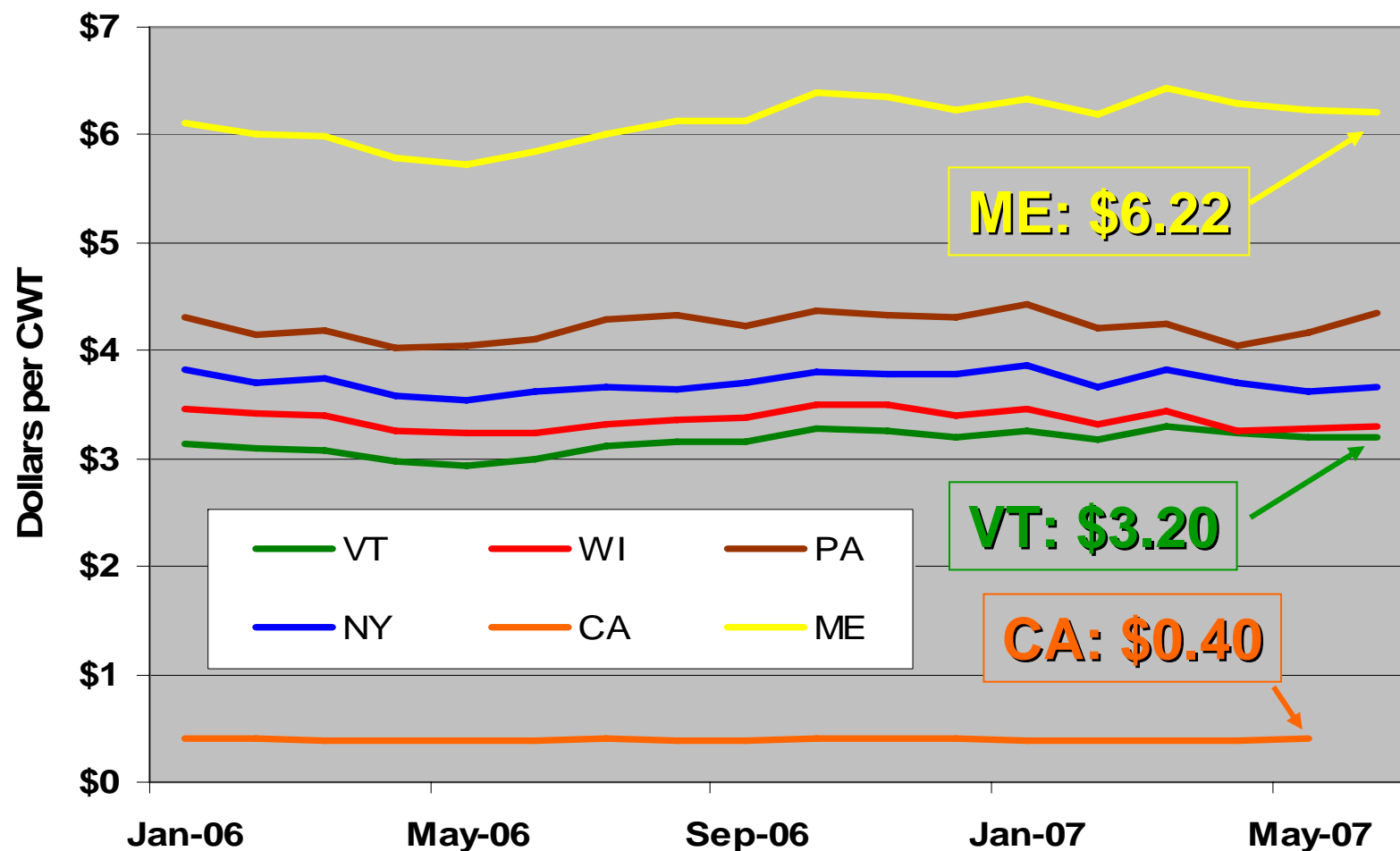
Homegrown Feed Costs: January 2006 – June 2007.



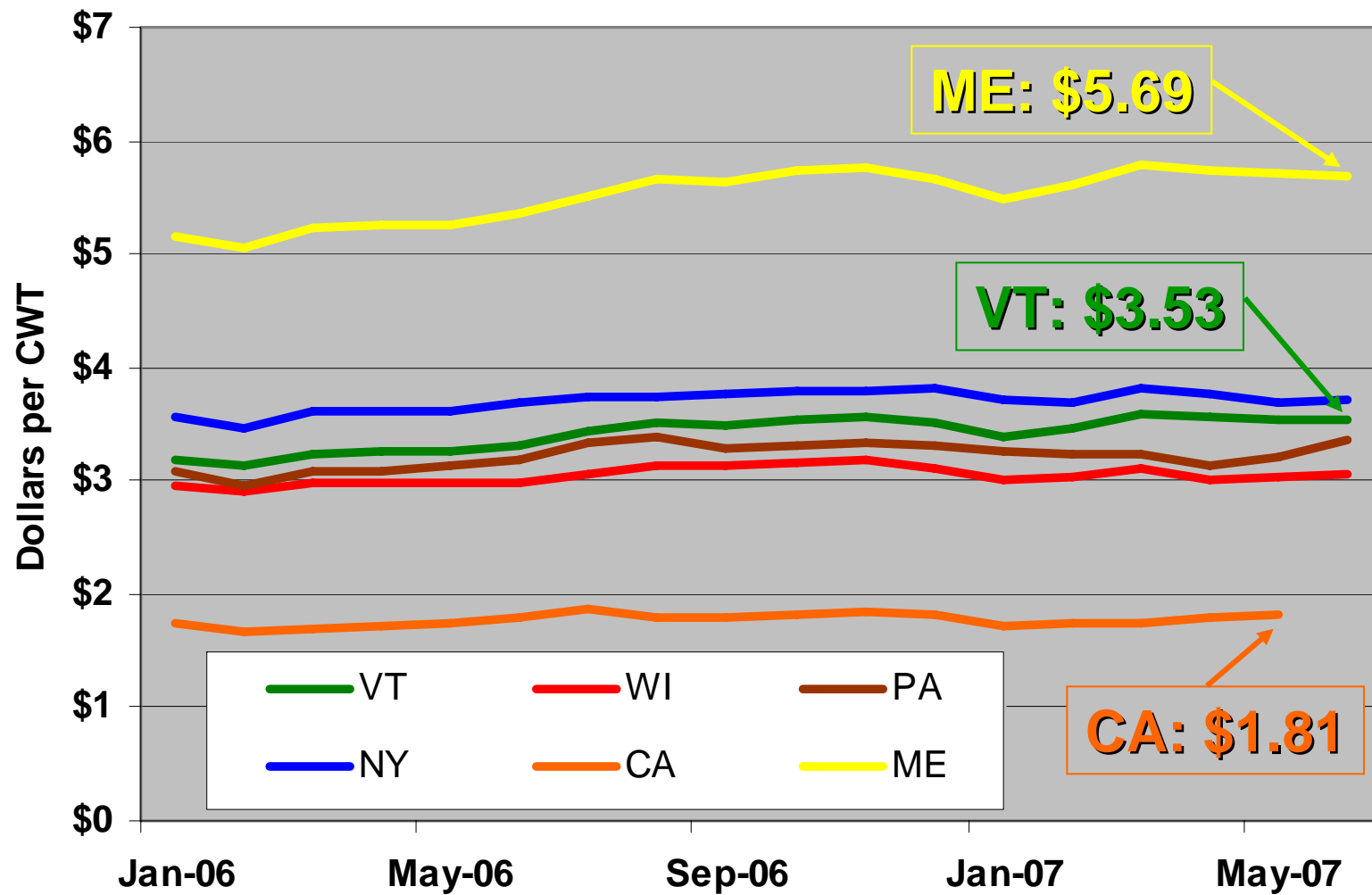
Allocated Overhead Costs

- **Opportunity Costs of Unpaid Labor:** family owned and operated farms – ME, NY, PA, VT, and WI.
- **Opportunity Costs of Land:** land used to produce silage and hay.
- **Capital Recovery:** relatively greater amounts of machinery and equipment.

Opportunity Costs of Unpaid Labor: January 2006 – June 2007.



Capital Recovery Costs: January 2006 – June 2007



Greatest Input Costs per CWT: 2006 Ave.

CA	NY	VT	WI
Pur. Feed \$6.68	Home Feed \$5.18	Pur. Feed \$4.45	Home Feed \$4.64
Capital \$1.78	Pur. Feed \$3.98	Home Feed \$4.18	Pur. Feed \$3.65
Home Feed \$1.62	Unpd. Labor \$3.70	Capital \$3.37	Unpd. Labor \$3.37
Hired Labor \$1.43	Capital \$3.68	Unpd. Labor \$3.11	Capital \$3.04

Greatest Input Costs per CWT: 2006 Ave.

CA	NY	VT	WI
Pur. Feed 46.2%	Home Feed 22.3%	Pur. Feed 20.3%	Home Feed 22.7%
Capital 12.3%	Pur. Feed 17.1%	Home Feed 19.1%	Pur. Feed 17.9%
Home Feed 11.2%	Unpd. Labor 15.9%	Capital 15.4%	Unpd. Labor 16.5%
Hired Labor 9.9%	Capital 15.8%	Unpd. Labor 14.2%	Capital 14.9%

Estimated Massachusetts Costs	\$/CWT	
Feed	9.65	
Vet & Medicine	0.88	
Bedding	0.44	
Marketing	0.27	
Fuel, lube, electricity	0.75	
Repairs	0.70	
Other Op. Costs	0.44	
Interest on Op. Costs	0.23	
<i>Operating Costs</i>	13.37	
Hired Labor	1.92	
Op. Cost Unpaid Labor	4.27	
Capital Recovery	3.92	
Op. Cost Land	0.05	
Taxes and Ins.	0.34	
General Overhead	0.89	
<i>Allocated Overhead</i>	11.40	
<i>Total Costs</i>	24.76	

\$19.76
(80%)

\$17.84
(72%)

+

Conclusions and Comments

- Best Guess about Massachusetts costs of production: \$24.76 *on average*.
- Prior Study (1999):
 - Massachusetts costs of production not statistically different from Vermont (*ceteris paribus*).
 - Median cost of production lower than average costs by \$1.50 - \$2.50.
 - Costs by herd size: small herds greater by \$5 to \$7 per CWT.